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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,706	11/24/2003	Manabu Sawasaki	1324.66570	5369
7590 01/25/2008				
Patrick G. Burns, Esq. GREER, BURNS & CRAIN, LTD. Suite 2500 300 South Wacker Drive Chicago, IL 60606				
			EXAMINER NGUYEN, DUNG T	
			ART UNIT 2871	PAPER NUMBER
			MAIL DATE 01/25/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/720,706	<b>Applicant(s)</b> SAWASAKI ET AL.	
	<b>Examiner</b> Dung Nguyen	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23,25-28 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23,25-28 and 31-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                  |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                             | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/18/07</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

Applicant's amendment dated 10/26/2007 has been received and entered. By the amendment, claims 23, 25-28, 31-35 and newly added claim 36 are now pending in the application.

Applicant's arguments with respect to claim 23 have been considered but are moot in view of the new ground(s) of rejection as follow:

#### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "second resin layer being configured to be in contact with the liquid crystal" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

It should be noted that although figure 4 shown that the second resin layer (29) being contacted with the liquid crystal layer (LC), the specification does stated that the vertical alignment layer used to formed to cover the entire TFT substrate is not shown (see [0065]). In other words, the second resin layer can be covered by the vertical alignment as well; therefore, such limitation of the second resin layer must be shown in the drawing as stated above.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 23, 28, 31-32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lien et al., US 6,493,050.

Regarding claims 23, 28, 31-32 and 34-36, Lien et al. disclose a liquid crystal display (LCD) device (figures 11A-11B, 3-4 and 16 ) comprising:

- . a thin film transistor (TFT) substrate having a substrate (304) with resin color filters (306) and a pixel electrode (322);
- . a common electrode substrate having a second substrate (302) having a common electrode (338);

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- . a liquid crystal layer (101);
- . a columnar spacer having laminated resin layers (color filter stacks 312) and a second resin layer (308/320) that contacted with the liquid crystal layer (101);
- . an alignment regulating structure (334).

Lien et al., however, do not disclose a photosensitive acrylic resin based material for the second resin layer. Lien et al do disclose the second resin layer can be made by a photoresin layer (col. 7, ln 20-21). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a photosensitive acrylic resin for the Lien et al. second resin layer, since it has been held to be within the; general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

4. Claims 25 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lien et al., US 6,493,050, in view of Kadota et al., US Patent 5,818,550.

Regarding the above claims, Lien et al disclose the claimed invention as described above except for the thickness of the second substrate. Kadota et al. do disclose the second substrate (12) can be thinner than the first substrate (0). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to form an upper surface (display side) thin and light in order to reduce side and birefringence on an LCD display side.

5. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lien et al., US 6,493,050, in view of Kurematsu et al., US Patent No. 5,764,318.

Regarding the above claims, Lien et al. disclose the claimed invention as described above except for the common substrate being of alkaline glass. Kurematsu et al. disclose an alkaline

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glass can be formed in an LCD device (col. 2, ln 64-67 and col. 3, ln 1-3). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ an alkaline substrate as shown by Kurematsu et al. for cost efficiency (Id.).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN  
01/22/2008

/Dung T. Nguyen/  
**Dung Nguyen**  
**Primary Examiner**  
**Art Unit 2871**